

## Canada's Investment in

# Cancer Survivorship Research, 2005–2019

### CANADIAN CANCER RESEARCH SURVEY

Since 2005, CCRA members have prioritized the quantification of Canada's cancer research funding. To that end, the CCRA's Canadian Cancer Research Survey (CCRS) was created, a database that has evolved over time to track the research investments made by over 40 organizations.

The CCRS is estimated to cover about 60–80% of the research investments made in Canada through peer-reviewed processes. For the area of cancer survivorship, there may be funding from large foundations and other organizations not captured in the CCRS that could affect the overall investment picture.

Data are updated and corrected annually and will vary from previously published reports. Investment numbers may differ from those reported by contributing organizations because of methodological conventions like prorating of budgets.

### THIS REPORT

This brief report provides an overview of the level and nature of research investment in cancer survivorship made by Canadian research funding organizations. Page 3 of this report presents annual investment data, while page 4 shows the proportion of the investment by key attributes for 2019 (graphs) and for the three five-year periods (tables). Data were coded to the classification below. Full definitions of the dimensions in this classification can be found on the CCRA website.<sup>1</sup>

#### RESEARCH FOCUS

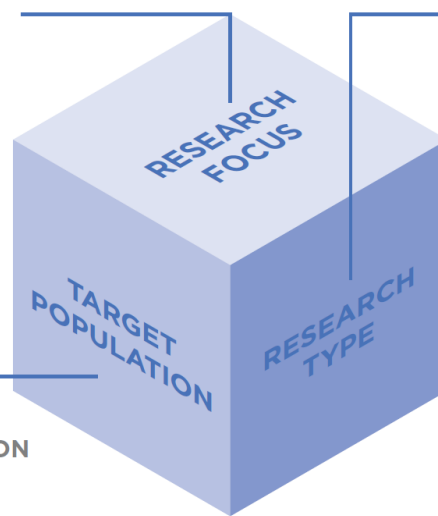
- Physiological effects
- Psychological effects
- Quality of life
- Social needs/social support
- Economic sequelae
- Care delivery, access and quality
- Thanatological issues

#### RESEARCH TYPE

- Model systems
- Descriptive
- Intervention
- Prediction/assessment
- Knowledge synthesis
- Other support

#### TARGET POPULATION

- Patients
- Family/caregivers



The cancer survivor population is diverse—there are many kinds of cancer and people are diagnosed at different stages and receive different treatments. Treatment outcomes and long-term effects can be further complicated by the patient's age and pre-existing health conditions. A pan-Canadian research framework for cancer survivorship research was released in 2017 to help prioritize research investment in this area.

Recent publications suggest that cancer survivorship has not yet received the priority it is due within Canada's health system and that work is needed to ensure improve provider competencies to provide comprehensive and equitable systems of care for people living with and beyond cancer.<sup>2,3,4</sup>

Access interactive visualizations and a related slide deck at

[www.ccra-acrc.ca](http://www.ccra-acrc.ca).

 @CCRAlliance

1 The CCRS technical manual is available at [https://www.ccra-acrc.ca/wp-content/uploads/2021/08/CCRS\\_Methods\\_v2021\\_08\\_24.pdf](https://www.ccra-acrc.ca/wp-content/uploads/2021/08/CCRS_Methods_v2021_08_24.pdf).  
 2 Truant TLO, Lambert LK, Thorne S. (2021). Barriers to equity in cancer survivorship care: perspectives of cancer survivors and system stakeholders. *Global Qualitative Nursing Research*, 8:1–9. <https://doi.org/10.1177/23333936211006703>  
 3 Chaput G, Sussman J. (2019). Integrating primary care providers through the seasons of survivorship. *Current Oncology*, 26(1):48–54. <https://doi.org/10.3747/co.26.4687>  
 4 Watson L, Lambert L, Chapman K, Fitch MI. Improving the outcomes for cancer survivors in Canada: An interactive approach to competency development using the newly released CANO/ACIO Survivorship Manual. *Canadian Oncology Nursing Journal*, 30(4):321–6. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7597778/>



### Investment Trend

From 2005 to 2019, \$282M was invested in cancer survivorship research and this represented 4% of the overall cancer research investment for the 15-year period. The investment climbed steadily from 2005 to 2016, dipping in 2017 and 2018, and then re-bounded in 2019. Investment from targeted programs played an important role in the increased investment. In the last five years, 2015-19, 19% of the total cancer survivorship research investment was focused on children and adolescents.



### Major Funders

Of the organizations tracked in the CCRS, most had some level of investment in cancer survivorship research over the 15 years. Much of the investment (71%) was made by three organizations: Canadian Institutes of Health Research (CIHR), Canadian Cancer Society (CCS), and Alberta Innovates.



### Research Focus

From the first to the latest five-year period, there were substantial increases in the research investments on physiological effects (\$40M), and care delivery, access, and quality (\$12M). In terms of physiological effects, the research investment in cardiotoxicity/vascular issues rose by \$12M from the first to the third time period.



### Researchers

442 nominated principal investigators (PI) received one or more award/grant focused on survivorship over the 15 years. There were 261 nominated PIs with funded for research projects during the 2015–19 period and a large percentage (49%) were working in institutions in Ontario.



### Investment by Funding Sector

Collectively, funders within the federal government represented over 40% of the cancer survivorship research investment for all three periods. Organizations within the charitable/voluntary sector accounted for 36% of the 15-year cancer survivorship research investment, a much higher proportion than the 23% the sector represented for the overall cancer research investment.



### Investment by Cancer Site

Breast cancer research represented 39% of the site-specific cancer survivorship research over the 15-year period. The largest increased investment was found for prostate cancer, which had \$12M more in survivorship research in 2015-19 than in 2005-09. Combined, prostate, breast and colorectal cancer survivors represent nearly 50% of all cancer survivors.



### Research Type

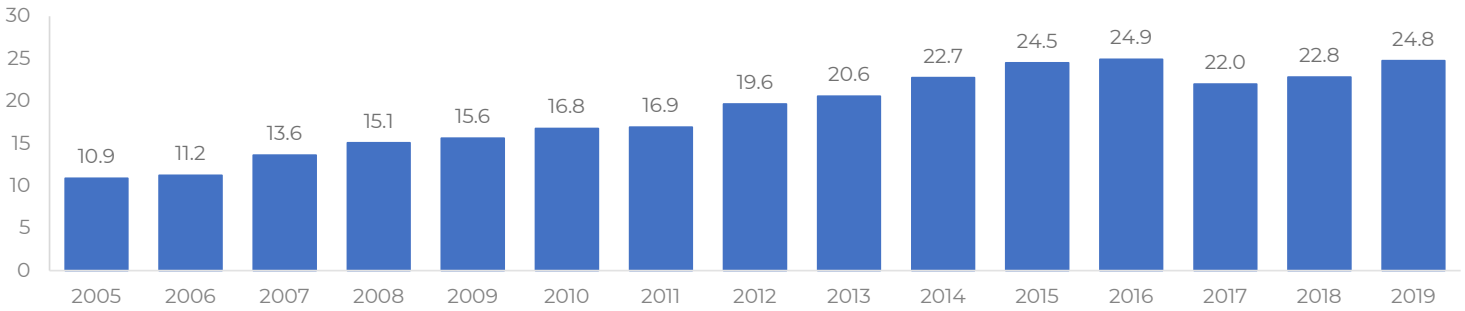
The research investment changed from the first to the latest five-year period in terms of type of research. \$27M more was invested in intervention research in the 2015–19 period than the 2005-09 period.



### Trainees

Although most trainees are supported from diverse sources like provincial or institutional programs, internships or operating grants, a small group of trainees receive awards through the grant peer-review process. The investment in trainee awards focused on survivorship research was \$6M more in 2015–19 period than 2005-09.

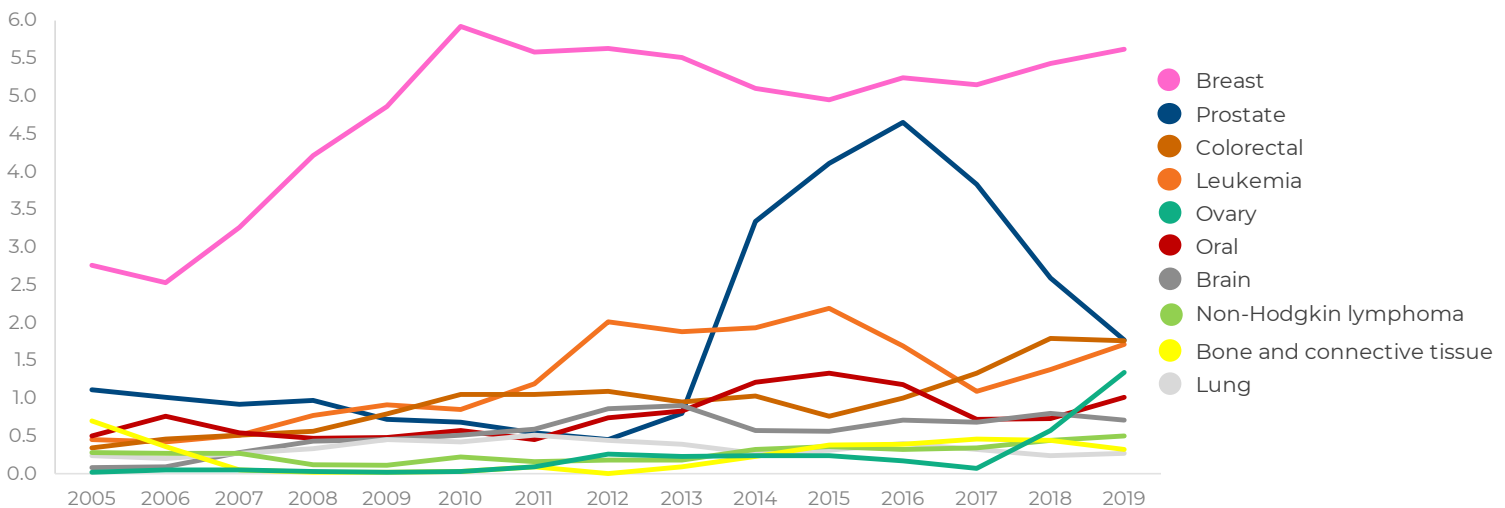
### Annual Investment (\$M)



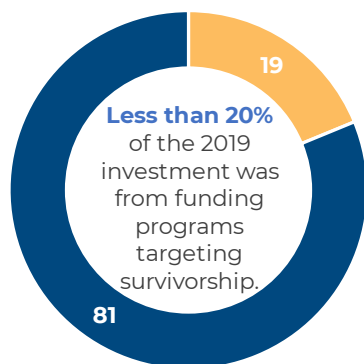
### Investment by Funder (\$M)

Funder	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CIHR	4.6	4.5	4.5	4.7	4.8	6.6	6.1	7.5	8.2	8.6	8.7	7.8	6.5	8.4	9.8
CCS	3.2	3.2	4.0	4.5	4.6	4.7	4.4	5.5	5.9	7.2	7.5	7.9	7.1	6.2	6.4
Alberta Innovates	0.5	0.8	0.9	1.1	1.2	0.9	0.9	0.6	0.4	0.3	0.5	1.8	2.1	2.1	2.0
Fonds de recherche du Québec - Santé	0.3	0.4	0.4	0.3	0.3	0.3	0.6	0.8	0.9	0.8	0.9	0.9	0.9	1.1	0.8
Public Health Agency of Canada	0.2	0.2	0.3	0.4	0.5	0.5	0.7	0.7	0.9	1.2	1.3	1.2	0.8	0.4	0.1
Canada Research Chairs Program	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.8
Ontario Institute for Cancer Research	0.4	0.2	0.2	0.0	0.0	0.1	0.3	0.4	0.4	0.7	0.9	0.8	0.7	0.6	0.7
Alberta Cancer Foundation	0.1	0.1	0.2	0.4	0.6	0.5	0.4	0.3	0.1	0.5	0.9	0.8	0.4	0.4	0.7
Ontario Health - Cancer Care Ontario	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.2	0.2	0.0
Other	1.1	1.4	2.7	3.2	2.9	2.3	2.6	2.7	2.5	2.4	2.9	2.8	2.7	2.9	3.4

### Investment by Cancer Site (\$M)



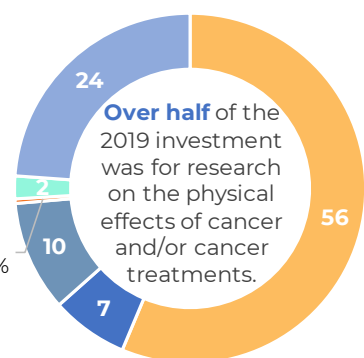
### Program Type (%)



- Targeted
- Other

	2015–19	2010–14	2005–09
Targeted	22	22	10
Other	78	78	90

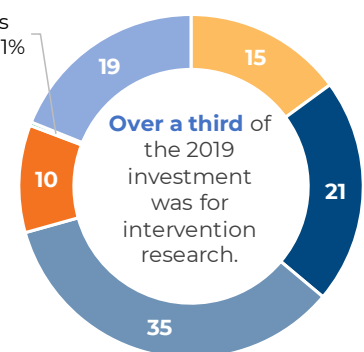
### Research Focus (%)



- Physiological effects
- Psychological effects
- Quality of life
- Social needs/social support
- Economic sequelae
- Care delivery, access and quality
- Thanatological issues

	2015–19	2010–14	2005–09
Physiological effects	58	51	44
Psychological effects	9	15	18
Quality of life	12	15	21
Social needs/social support	2	2	3
Economic sequelae	2	2	2
Care delivery, access and quality	17	15	12
Thanatological issues	0	0	0

### Research Type (%)



- Model systems
- Descriptive
- Intervention
- Prediction/assessment
- Knowledge synthesis
- Other support

	2015–19	2010–14	2005–09
Model systems	13	9	12
Descriptive	26	34	35
Intervention	37	32	26
Prediction/assessment	11	14	6
Knowledge synthesis	1	1	1
Other support	11	9	20